/362 cont./

262 [252] The Chiriguano call kumanara a leguminous plant, wild, which resembles the yuca and which can serve as food after being boiled. They resort to it only when pressed by hunger. The word designating this plant has a strange resemblance to [192] the name of the batata in the Quichua dialects of Ecuador and northern Peru (Rivet, 3, pp. 583-590). It is perhaps a question of a Quichua word introduced into the Chiriguano language to designate a plant of which they did not have the equivalent in their original homeland. The case is nevertheless rare, and one can wonder if it is not a simple coincidence.

[222] [171] Neither do the Chiriguano look down on honey, although they do not seek it with the passion of their cousins, the Kainguá. What I tasted among them was contained in thin honeycombs having the consistency of cardboard. It had a pleasant taste.

222 784 [176] Any Indian who goes in search of honey (ei) must not make his intention known to anyone and, if he is asked where he is going, he must answer: "To look for wood." If you do not take these precautions, the protecting spirit of the honey is warned of your plan and hides the honeycombs he guards (Diccionario Chiriguano-Español, etc., p. 86).

222 114 [252] The missionary Corrado (p. 43) assures us that grasshoppers, cicadas, the larvae of bees are that many delicious dishes for the Chiriguano. He adds that these insects are roasted. Nino (p. 247) reproduces the statements of his predecessor and completes the list of strange foods by adding /363/ ants, lizards, leaves of the cucurbitaceae, melted tallow, etc. Personally I [171] have never seen the Chiriguano touch these dishes strange to our palates, but I am all the more inclined to believe these two missionaries that the tastes they indicate are actually those of the Indians in other regions.

262 252 Already in the 16th century the Chiriguano passed as snake lovers, even of poisonous species. They cut off the head and tail, skinned them, and roasted pieces of them on live coals. They used to eat them with pimento. No doubt the Spaniards con- [178] fused snakes with iguanas, which even today the Chiriguano justly like (Lizárraga, Vol. I, p. 260).

2:Métraux E-5 (1929) 1948 SF10 Chiriguano SF10
Chane SF8

The migrations, wars, and the religious conversion of the *Chiriguano* have been the subjects of many historical monographs. The most important of these are by Corrado (1884), Serrano y Sanz (1898), Dominguez (1918), Gandia (1929 a, and b), Métraux (1930 b), Coni (1925), Moreno (1929), and Finot (1939). The Jesuit missionary work among the *Chiriguano* has been described by Lozano (1941) and Muriel (1918).

CULTURE

SUBSISTENCE ACTIVITIES

As today *Chiriguano* and *Chané* share in the same culture, the following data may apply to both tribes.

Farming.—The *Chané*, conquered by the *Chiriguano*, were proficient farmers who, though practicing a tropical type of agriculture, were probably acquainted with many of the methods of cultivation of the Andean area. The *Chiriguano* adopted their traditions. The new habitat of the *Chiriguano* did not offer the same resources for hunting and fishing as had their homeland. Therefore, these Indians depend on farming to a larger extent than any other *Tupi-Guarani tribe*. The basis of their livelihood is maize, of which they have 11 varieties, all related to those of Paraguay. Then follow in order of importance: Pumpkins, beans (11 varieties), sweet potatoes, sweet manioc, peanuts, and some Barbary figs (*Opuntia* sp). Sweet potatoes were grown on a large scale by the *Chané* of the Parapeti River.

These Indians also raise cotton, tobacco, urucú, and, in the Parapeti region, reeds for arrow shafts (*Arundo donax*). Plants of the Old World adopted by the *Chiriguano* include melons, watermelons, oranges, sugarcane, and sorghum.

Chiriguano men clear the fields and surround them with a tall fence as a protection against the inroads of wild or domesticated animals, a task which is considered to be particularly strenuous. They also till the soil, but at harvest time they are assisted by the women and children. The latter, armed with slings, drive away the parakeets and other birds which prey on the crops. Nordenskiöld (1912, p. 183) observed that among the *Chané* of the Itiyuro region, large maize fields were tended by men while pumpkins and beans were raised by the women.

Collecting wild food.—When their crops fail, the *Chiriguano* subsist on the same species of pods and fruits as those collected by the Chaco Indians: Algarrobo, tusca, mistol, caraguatá, and other plant foods.

Hunting.—Hunting is a very secondary economic activity, at least in modern times. Peccaries, which are the main game animal, are hunted with specially trained dogs and killed with bows and arrows or with clubs. Rheas, which are abundant in the Chaco plains, are caught with bolas. Pigeons are captured with clap nets. Special arrows with two points are used for hunting yacu birds (*Penelope* sp.).

/28 cont./

139 824 [262] [283] There is another small caraguata which invades wide areas of land, preventing any animal from entering there, because it has spines on the bottoms of the leaves. In times of scarcity its root is food for the poor Chiriguano; the root contains a little starch which has the taste of mandioca, but it requires great effort to pull it up. The leaf of this tilandsia is also good for making cord.

Finally, there is a third one which flourishes abundantly in trees and on the rocks of the hills, but which has no peculiar properties; it is large because of its leaves, which measure up to one meter in length. The plant is thick, the leaf fleshy, and it is used to decorate the streets with arches during processions. The aloe is similar to the second type of tilandsia, but aloe leaves are wide and thick, full of juice, while those of the tilandsia are slender, arched, and dry. The aloe is not abundant; only an occasional shrub or plant is found.

244 /29/ TOMATO. -- This plant which produces fruits so pleasant and useful to the culinary art flourishes exuberantly in these lands; the fruit from each plant is abundant and is produced the year round when some care is taken to protect the plant from the cold or from the light frosts which customarily [237] fall in June and July. To do this it suffices to pile up dry cow dung in two or three places in the tomato patch and set them [177] afire. True tomato plants are also found in the woods, but it is presumed that some bird must have carried the seed to such places; the tomato is a plant which has been brought into the Chiriguano country, as is the case with the onion, the sweet potato, and the cabbage.

● 222 In the woods there is a kind of tomato in the wild state, which is somewhat similar in appearance and taste, but which is quite different from the true one; it is picked green and allowed to ripen in a room on top of a piece of wood; in a [244] few days it turns red, which is a sign that it is ripe. The chili pepper also produces abundantly and with little care; it is a plant which lasts up to three years if care is taken to prune it, and the second and third years the fruits are very hot. Another kind of small, round chili pepper abounds in the woods and bears spontaneously; it is called arivivi by the whites and "quii rai" by the Chiriguano. It is hot, and some cure sickness,

222 /29 cont./ It is hot, and some cure sickness,
[957] or inflammation of the eyes, with it. Nevertheless, one should not confuse this little plant with another similar one whose fruits lack flavor and which is called by the Chiriguano "Aguara quii," which is to say, literally, chili pepper, of the fox. The best way not to confuse it is to taste the fruit; it is found everywhere.

243 TRIGO /wheat/. -- The Eternal Creator of all things in his bounty and mercy arranged that this small plant, necessary in every aspect, should yield its fruit in every region inhabited by man; thus, in spite of the excessive heat, it is harvested here in abundance, and the farmer is not robbed of his hopes if he takes care to irrigate the field opportunely. Barley also flourishes in irrigated lands, but the cultivation of both has been abandoned for reasons already expounded in these pages and also because birds greatly bother both crops, as also happens in the rice paddies, which will be found empty if they are left to the discretion of our flying friends.

[824] There also thrives together with maize, or in other places,
[412] the wheat called Guinea, or sweet sorghum, which the Chiriguano call "Tricu" and which is indigenous; it is sweet, matures with maize, and they suck it, as well as the panicled sorghum, which is a kind of sorghum /30/ without sweetness and used for making brooms for sweeping. The seed of both plants is liked by birds.

137 VID /grapevine/. -- Farther on I have said that this plant
824 pre-eminently required for the Sacrifice, like wheat, thrives quite vigorously in this region. I add here that in the woods
[262] there is a tree with small leaves and unimportant wood, which rises up to some eight meters above the ground and whose fruit is the size of an olive, has a dark coffee color and a flavor like that of the grape, matures in the month of February, is edible, and is called "Ivaviyu" in Chiriguano. Also in the wild state is the native grape with its twining trunk. Its fruits are like a bunch of grapes; they are white and some even black, and they are good for the manufacture of brandy.

/43 cont./

*136 There are wasps, and they are of several classes, but the yellow or red ones are the most vicious; there are bees in the trees, in the roofs, in the walls, and in the ground, and all of them make hives in order to make honey and wax, but the best honey is that of the bees called señoritas. Both things, that is, honey and wax, are known as beneficial by the Indians, but they devote themselves to this very little, because they consider it the work of lowly and poor people, and the Chiriguano does not like to consider himself such. Wax is seldom gathered, even in times of scarcity, nor does the neophyte or new Christian work at earning his living by looking for beeswax.

*136 *825 A spider bite almost always produces bad consequences, which can be avoided by the use of ammonia; this is another plentiful insect. In the rainy season they extend their webs from one tree to another, obstructing the road, no matter how wide it may be, and frequently travelers who are out at night or who get up early are bothered by these webs, which stick to their faces and clothing, /44/ just as the spiders themselves, which are so loathsome, not infrequently catch hold. The bite of those that live in the forest, they state, is not poisonous.

All spiders are called "Yanduti" in Chiriguano, and the web, "Yanduti nupa," or spider's bed; from the web of the forest spiders the children make nets for catching birds or for their games. When wet they are quite elastic. The true tarantula, which the whites call apasanca and the Indians "Yanduti huasu," is quite ugly because of its fuzz, eight legs, and two arms. The natives state that it is poisonous, but its bite is not fatal. They almost never come out by twos, but upon killing one and wanting to know if it has a companion, it is enough to burn the dead one in order to cause the live one to come out the moment it smells the odor. The apasancas, or tarantulas, come out when it is about to rain and do not make a good impression. The natural enemy of spiders, including the tarantula, is another flying insect the size of an acorn, which the people of Santa Cruz call

/60 cont./

223 River, he tied inflammable material to the horns of 2,000 oxen, lighted it, and drove the oxen up to the heights, thus managing to get through and gain a victory over the Roman army, which, believing the oxen to be enemies running in every direction, abandoned the narrow pass to defend other positions and was defeated the next day. In the above-
[221] [262] mentioned months young men and children sleep little at night in order to go hunting for doves and to have a delicious meal the next day with their families, since the slaughter of doves and other little birds which are unfortunate enough to sleep near them is great.

*136 PATO /duck/. -- Where there are lakes or ponds there are innumerable ducks of many sizes and colors; some are so large that they seem to be geese. There are black, white,
[262] pink, and brown ones; the last are fat and delicious. The Chiriguano eats the meat of the duck, but he does not pursue
[223] it, because he finds this so difficult. When he can, he hunts
[222] it, but more because this web-footed bird puts or deposits its eggs on the shores of a lake, on top of the grass or hidden among the reeds which grow near lakes; these are /61/ avidly sought by young and old, men and women, because the water is not deep in these places. The duck is called "Ipe" in Chiriguano which is, literally in the water, since lake is called "Ipa," or wide or extended water.

PAVA /turkey/. -- They have their favorite places and do not go far from them; they will be found there exactly at sunrise and before nightfall. They reveal themselves when a hunter or anyone else approaches, because they immediately begin to cackle and to fly from tree to tree in fear, which causes a disagreeable noise. The turkeys are as big as a large chicken, with quite a long tail and black feathers.
*[825] There are two kinds: the larger one is called "Yacu" and is found in abundance from the right bank of the stream Cuevo; the others are called charatas by the whites, "Anancua" in Chiriguano. These are numerous from the left bank of the Parapiti River in the province of Lagunillas.

/244 cont./

252 262 Gourds are eaten boiled, roasted, and in broth; the seed is enjoyed when roasted with maize meal, parched maize, or beans. They also eat them as broth, which they call Güindaca mi quira, or grease of the gourd, to which they add chili pepper and salt, just as they do with beans cooked in ollas with the whole pod, which they call Sopirigua.

241 If the Chiriguano manages to plant a little maize beans /poroto/, and gourds, he is content and stops planting other, less important seeds. Few plant Yeti, sweet potato, Mandiporopi, mandioca, Tacuaneé, sugar cane, and Monduvi, peanut. They all plant watermelons and other melons; many plant figs and tunas, or nopal, and few cultivate orange trees, because this Indian has little patience for waiting on the ingratitude of certain plants which require much care and are very slow in yielding fruit (2).

[192] [177] 2. Names for watermelon /sandía/ and melon /melón/ do not exist in the Chiriguano language, which indicates that these fruits were introduced by the whites, from whom the Indians got them.

222 245 262 The nopal is very abundant in this area, rising to some three or four meters; its fruit is very exquisite, as everyone knows. Its cultivation is nil; it is enough to pluck off a branch of the main plant and bury it halfway, and its sweet fruit will ripen from the second year on. It is the plant that the Chiriguano value most.

245 Even the fig tree, which also needs little care, is cultivated. They call it Iva, as well as calling the nopal Saini, and both plants seem to be native, because they grow in hot places, and the name indicates that they have always had them. The fig tree requires more cultivation than the nopal, but this is relatively insignificant; they pull off a branch, plant it during the rainy season, and let it grow fully without pulling off any shoots (3).

439 3. Whites who live among the Indians are

/252 cont./

262 As very savory food there are also cicadas, ants, lizards, locusts, and some green worms which cause disgust just to name them. If a head of cattle dies and putrefaction has begun, the Chiriguano finds it excellent; give it to him and it is a grand gift, and that day is a carnival for him; he does not try to find out whether the animal died from the poison of a viper or rattlesnake or from rabies (1).

262
252 1. When Indians bring home the meat of dead cattle well into a state of putrefaction, they boil it in ollas and throw away the liquid, and in this way it loses much of its bad smell.

262
178 I do not know whether it is through superstition or because they are descendants of the Jews that this tribe formerly did not eat the flesh of the pig; although they like and hunt the wild boar or the peccary, they did not touch the domestic pig, but today almost all of them, with the exception of some women, eat it.

261
262 The Chiriguano suffers in times of hunger or scarcity of food, but he looks for food in the earth; this is very harmful food, which produces various ailments, such as consumption and
[252] dysentery. He looks for the potato of the serpentine arum, ex-
[164] tracts it, and, making a hole, heats it, throws the potatoes there, and covers it with ashes and embers, leaving them overnight; on the following day he and his family eat, but it gives them a bad stomach-ache, which makes them throw themselves down with their bellies to the ground until the pain abates; the same potato, raw, is efficaceous for killing worms in the galls of animals.

● [222] Another food in times of scarcity is the Caraguata; this
[252] is a kind of aloe with leaves without the oily liquid; the edible part is the roots, which have a flavor like mandioca; it is considerable work to pull them out of the ground, where they are firmly attached, and the mealy substance is /253/ little enough; to eat it, it is roasted in the coals or under the ashes. When it is the time for fruits and want threatens, the Chiriguano

5:Nordenskiöld E-5,½(1908-1909, 1913) 1920
SF10 Chiriguano SF10
Chane SF8

shall see that the methods of fishing differ somewhat in the different rivers. At the Rio Pilcomayo the Indians must always have found a good supply of food. As many Chiriguano live by very insignificant streams they never have the opportunity of fishing. The Chané all live in places where they are able to procure fish during some part of the year at least.

Big game is scarce in the land of the Chiriguano and Chané. Nor are these Indians keen huntsmen. One seldom sees game that has been killed by them in their huts. The great flocks of fat pigeons that settle in their fields are for the most part left unmolested.

As we shall see in the following the Chiriguano and Chané live mostly by tilling the ground. Owing to the comparative dryness of their land maize is cultivated more than anything else. It is the ease with which this plant can be grown here, that makes the land of the Chiriguano and Chané a good land to dwell in.

The fruit of the carob-tree (algarrobo) is the most important wild fruit. Probably no careful study has ever been made of the climatic conditions of the Chiriguano and Chané country. It is situated in the tropics, north of the tropic of Capricorn and the traveller there of course suffers more from heat than cold. In May and June especially, however, when there is a strong south wind, it is agreeable to have a well built house, warm clothes and a snug bed. The rains begin in December and leave off in April or May. It sometimes happens that there is little or no rain and then the crops are a failure. They are often destroyed by grasshoppers.